



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,952	03/12/2004	Toshio Miyamoto	024446-00007	7726

7590 09/21/2005

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
Suite 600
1050 Connecticut Avenue, N. W.
Washington, DC 20036-5339

EXAMINER

OKEZIE, ESTHER O

ART UNIT	PAPER NUMBER
----------	--------------

3654

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,952

Applicant(s)

MIYAMOTO, TOSHIO

Examiner

Esther O. Okezie

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's arguments filed 7/05/05 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Wood.
2. Re claim 1, Wood discloses an article gripping apparatus attached to the end effector of a robot arm (column 2, lines 54-56) comprising a grip (19) capable of gripping or releasing a workpiece (11); a movable body (piston 42 of actuator 36) provided on a driving base (collar 49) so as to extend or retract by a driving means (actuator 36); a link means (34b) for linking an extending or retracting movement of the movable body with a gripping or releasing movement of the grip; and a workpiece drop prevention means (interference wedge block 38) for preventing a workpiece from dropping by attaching to the movable body to stop the releasing movement of the grip when the driving means is stopped (column 1, lines 56-68; column 2, lines 1-14), wherein the workpiece drop prevention means further comprises a protrusion stick (38) with a tapered tip (41) a support rail (42) supporting the protrusion stick so as to slide the protrusion stick between a protrusion position (fig. 3) where the protrusion stick abuts on the movable

Art Unit: 3654

body and a recess position (fig. 5), a momentum means (spring 61; col. 4, lines 39-68; col. 5, lines 1-7) for pushing the protrusion stick supported by the support rail at the protrusion position, and a holding means (fluid cavity 45 filled by port 71, synonymous with the fluid holding means of the disclosure) for holding the protrusion stick at the recess position resisting against the pushing of the momentum means in a normal state and for releasing the protrusion stick when the driving means has stopped operating (column 1, lines 56-68; column 2, lines 1-14; column 3, lines 30-69; column 4, lines 5-69; column 5, lines 1-52).

3. Re claim 2, the holding means (fluid cavity 45) controls gripping and releasing the protrusion stick by the driving means (36) of the movable body (cylinder 20 controls the movable body/linear actuator 36 and the protrusion stick/wedge block 38 and as pressure builds up in the holding means/fluid port 45 the wedge block 38 is held relative to the linear actuator 36; column 4, lines 51-69; see figures 3-5).

4. Re claim 3, the grip has at least a pair of fingers (32) mounted pivotally on a gripping base (34) and movement of gripping and releasing the workpiece are performed from both lateral sides of the workpiece by rotating the fingers around a pivot axis (figs 3-5).

5. Re claim 4, the grip has at least a pair of fingers (32) mounted pivotally on a gripping base (34) and movement of gripping and releasing the workpiece are performed from both lateral sides of the workpiece by rotating the fingers around a pivot axis (figs 3-5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in view of Langowski. Wood does not disclose a connecting pad for connecting the lever and the movable body, although Wood does disclose a link including the lower portion of jaws (32) connected to the movable body for extending and retracting movement of the movable body linked with a rotating movement of the fingers (figures 3-5). Langowski discloses a pivotal pipe gripping head with connecting pads (links 39 and 39'). The inventions of Wood and Langowski are both pivotal jaw end members actuated by a moving cylinder. It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the invention of Wood connecting pads for link the levers with the movable body (36) in to add greater leverage to the fingers for wider rotation.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive. In the previous action the Examiner mistakenly presented the wedge block 38 as being supported by and attached to the crank portion 34. This is an error that can clearly be

Art Unit: 3654

negated by the reference itself and the figures. Figure 2 clearly shows the wedge block 38 supported by a movable body which is piston 42. Col. 3, lines 45-57 discloses piston 42 fits within the bore 43 of wedge block 38. Also the Abstract discloses, "A piston portion of the actuator is contained in a cylinder portion of the wedge block." Col. 3, lines 30-40 explain that the linear actuator 36, the driving means, drives the piston 42 and clamp fingers 32.

The Applicant has argued that Wood does not disclose a workpiece drop prevention means for preventing a workpiece from dropping by attaching to the movable body to stop the releasing movement of the grip when the driving means is stopped. In response Wood clearly discloses "an interference wedge block [38] is biased against the clamp finger by a second, "soft", spring reacting against the actuator to prevent the finger from opening under the influence of an external force..." Figs 3-5 clearly show the interference wedge block 38 attaching to the movable body 42 to wedge between the fingers 32 locking them in place and in effect stopping them from releasing the workpiece 11 once the linear actuator 36 stops moving (see figs 3-5 and description of figs 3-5: col. 4, lines 60-68; col. 5, lines 9-52).

The Applicant has argued that Wood does not include a support rail for supporting the protrusion stick (wedge block 38). In response, figure 2 clearly shows the wedge block 38 supported on a movable body which is piston 42. Col. 3, lines 45-57 discloses piston 42 fits within the bore 43 of wedge block 38. Also the Abstract discloses, "A piston portion of the actuator is contained in a cylinder portion of the wedge block." Consequently Wood teaches the disclosed invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esther O. Okezie whose telephone number is (571) 272-8108. The examiner can normally be reached on Mon-Thurs 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine A. Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EOO

A handwritten signature in black ink, reading "Kathy Matecki". The signature is written in a cursive, flowing style.

KATHY MATECKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600